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# Determination of the efficiency of the hydro-mechanical differential variator

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## Abstract

© 2016, Oriental Scientific Publishing Company. All rights reserved.The author has carried out the analysis of dynamic-coupled automatic transmissions and regarded the prospects of their application and development. New design of continuously variable transmission based on differential hydra-mechanical gear train was developed and covered by RF patents No2298125 and No2347966. Principles of work performance for high-torque differential hydra-mechanical gear train based on interoperation equableness of moments opposing one another that are produced at the gear carrier owing to inner forces of differential stages as well as self-actuated pressure variation and hydraulic fluid consumption change when it comes through hydraulic pump and hydraulic actuator.

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## Keywords

Continuously variable transmission, Differential hydramechanical variator, High-torque differential hydra-mechanical variator, Hydra-mechanical gear train, Mechanical diagram